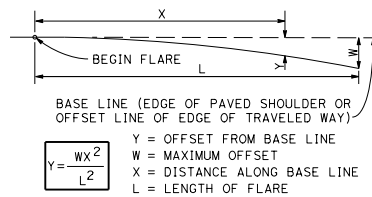


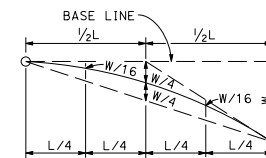
NOTE A: For a series of fixed objects (bridge columns, overhead sign supports, etc.) additional 10' x 10' x 8'-0" wood post with 8" x 8' x 1'-2" wood blocks at 3'-1/2" center to center spacing are to be used between fixed object(s).

STRENGTHENED MIDWEST GUARDRAIL SYSTEM SECTIONS FOR FIXED OBJECT

Use strengthened MGS sections with layout Types 16I or 16J Layouts where minimum clearance between the face of the MGS and fixed object(s) is less than 4'-0", but not less than 3'-0". See Note 4.

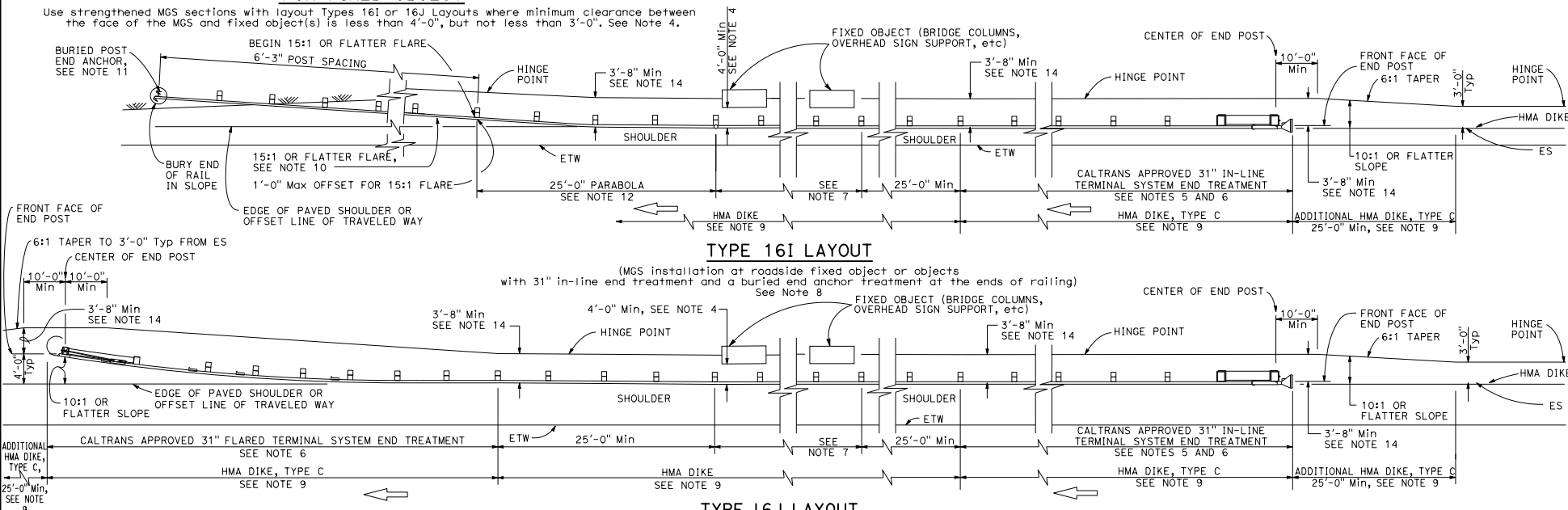


PARABOLIC FLARE OFFSETS



TYPICAL PARABOLIC LAYOUT

DIST	COUNTY	ROUTE	POST MILES	SHEET TOTAL
TOTAL PROJECT			NO.	SHEETS
Randell D. Hiatt REGISTERED CIVIL ENGINEER No. C50200 Exp. 6-30-19 CIVIL STATE OF CALIFORNIA			PLANS APPROVAL DATE May 31, 2018 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.	



TYPE 16I LAYOUT

(MGS installation at roadside fixed object or objects with 31" in-line end treatment and a buried end anchor treatment at the ends of railing) See Note 8

TYPE 16J LAYOUT

(MGS installation at roadside fixed object or objects with a 31" in-line end treatment and a 31" flared end treatment at the ends of railing) See Note 8

NOTES:

1. Line post, blocks and hardware to be used are shown on Standard Plans A77L1, A77L2, A77N1, A77N2 and A77M1.
2. MGS post spacing to be 6'-3" center to center, except as otherwise noted.
3. Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks, W6 x 8.5 or W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
4. A 4'-0" minimum clearance is required between the face of the railing and the face of a fixed object located directly behind MGS sections with post spacing at 6'-3". Construct MGS as shown in the detail "Strengthened Midwest Guardrail System Sections for Fixed Objects" on this plan, where the clearance between the face of the railing and the face of a fixed object is less than 4'-0", but not less than 3'-0". Where the clearance is less than 3'-0", a concrete wall or barrier should be constructed to shield the fixed object(s).
5. 31" in-line terminal system end treatments are used where site conditions will not accommodate a 31" flared end treatment.

6. The type of 31" terminal system to be used will be shown on the Project Plans.
7. As site conditions dictate, construct additional MGS to shield fixed object(s). Additional MGS length equal to multiples of 12'-6". Post spacing at 6'-3", except as specified in Note 4.
8. Layout Types 16D through 16L, shown on the A77R Series of Standard Plans, are typically used where MGS is recommended to shield roadside fixed object(s) and a crashworthy 31" end treatment is required for both directions of traffic.
9. Where placement of dike is required with guard railing, see Standard Plan A77N4 for dike positioning details.
10. The 15:1 or flatter flare for the buried post anchor is based on the edge of the paved shoulder or offset line of edge of the traveled way. The length of MGS within the 15:1 or flatter flare is based on site conditions and should be a length equal to multiples of 12'-6".
11. For details of Buried Post End Anchor, see Standard Plan A77T2.

12. For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Standard Plan A77P1.
13. W6 x 15 steel post, 8'-0" in length, with 8" x 8" x 1'-2" notched wood block or notched recycled plastic blocks may be used in place of the 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood block shown in the detail "Strengthened Midwest Guardrail System Sections for Fixed Object".
14. Use this offset for 8" block. For 12" block use minimum 4'-0" offset.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**MIDWEST GUARDRAIL SYSTEM
TYPICAL LAYOUTS FOR
ROADSIDE FIXED OBJECTS**

NO SCALE

A77R7